

C-A OPERATIONS PROCEDURES MANUAL

4.94.2 V-Target Access Security Gate Subsystem Check

Text Pages 1 through 6

Hand Processed Changes

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Revision 01

Approved by: _____
AGS Department Chairman Date

A. McGeary

AGS-OPM 4.94.2 (Y)

Revision 01
July 10, 1998

4.94.2 V-TARGET ACCESS SECURITY GATE SUBSYSTEM CHECK

1. Purpose and Scope

This procedure provides directions for the test and validation of the hardware portion of the V Target gate subsystem of the RHIC Particle Accelerator Safety System (PASS).

2. Responsibilities

- 2.1 The RHIC or AGS Safety Systems Group Leader shall ensure that this procedure is executed, at no greater than six month intervals, or at such times as required by the Radiation Safety Committee (RSC).
- 2.2 The RHIC or AGS Safety Systems Group Leader shall review and initial the completed procedure checklist.
- 2.3 The RSC Chairman (or his designee) shall review the test results and determine when retesting is required after changes in hardware or software have been implemented..
- 2.4 Members of the RHIC or AGS Safety System Group shall, as designated, conduct and document this procedure.
- 2.5 The software engineers shall ensure the configuration control of the software tested.

3. Prerequisites

- 3.1 This procedure may only be executed by members of the AGS or RHIC Safety System Group.
- 3.2 This procedure requires two individuals trained in this procedure for proper execution.
- 3.3 A Restricted Access zero key, Controlled Access #6 key and sweep/reset #7 key.
- 3.4 Standard electrical toolbag.
- 3.5 Proper setup and calibration of the current source boards should have been done before executing this procedure.
- 3.6 Programs loaded Divisions A & B for Peer 23 and recorded in PASS Engineering Change Log Book.

- 3.7 Peer 23 enclosure RSC is RS LOTO by AGS Safety Systems Group Leader Engineers.
Peer 23 (Tag #) _____
Peer 23 (Tag #) _____
RS LOTO Development System Access Connector (Tag #) _____
- 3.8 Prior to the execution of this procedure, the beam line shall be placed in a safe off condition by performing RS LOTO. RS LOTO of Booster F6 and BTA DH2&3 or equivalent approval by chair RSC prior to execution of this procedure.
RS LOTO applied _____
- 3.9 Notify the Operations Coordinator (OC) or the Main Control Room (MCR) supervisor that the VT line gate system is being tested.
- 3.10 Post Notices in the MCR and at the VTE1 gate that the gate system is being tested.
- 3.11 Prior to working at the inner V target gate, consult with Health Physics regarding the residual levels in the area. Also, verify that the V target shield is in place. If not, contact EAG for assistance.

4. Precautions

None

5. Procedure

This test will verify the following for both A and B divisions:

Door switch and crash glass switch
Strike solenoid and latch switch
Gate reset function and local indication
Sweep check station function and indication
Other indicator lamps at gate
MCR interface - AB Panelview 1400

- 5.1 From PASS Engineering Change Log Book, record software installed Peer 23, both Divisions A & B.

Division A Compiler version _____

Division B Compiler version _____

Peer 23 Div. A Program version _____

Save date _____

Peer 23 Div. B Program version _____

Save date _____

5.2 VTGE1 Gate Door switch, Crash Glass and Latch Switch (C1028014).

- 5.2.1 Perform a physical inspection of the gate to confirm its proper mechanical operation, that the position sensing limit switches are properly aligned and the integrity of the wiring. Check for simple exit through the gate by means of the inside doorknob.

Switch alignment OK _____

Wiring OK _____

Exit by doorknob OK _____

Door locked preventing entry from outside _____

- 5.2.2 MCR Panelview 1400 should display door open/not reset status.

Panelview display OK _____

- 5.2.3 Panelview should indicate OPEN for crash glass switch or latch switch or door switch open. Check A division hardware first, then B division. Note that B division has no latch switch.

Any A division switch open indicates OPEN on Panelview _____

All A division switches closed indicates NOT RESET on Panelview _____

Any B division switch open indicates OPEN on Panelview _____

All B division switches closed indicates NOT RESET on Panelview _____

5.3 VTGE1 Electric Strike and Status Lamps (C1028014)

- 5.3.1 Use Panelview to select Peer23 SAFE STATE.

Check that CONTROLLED ENTRY lamp is lit _____

Check that #7 key with simultaneous release (S/R) will release electric strike but key or S/R alone will not _____

Simultaneous release should be audible at gate _____

- 5.3.2 Use Panelview to select Peer23 R/A.

Check that RESTRICTED ACCESS lamp is lit _____

Check that #7 key is inoperative with or without S/R _____

- 5.3.3 Use Panelview to select Peer23 C/A.

Check that CONTROLLED ENTRY lamp is lit _____

Check that #7 key with simultaneous release will release electric strike but key or S/R alone will not _____

Simultaneous release should be audible at gate _____

5.4 VTGE1 Gate Reset Function (C1028014)

- 5.4.1 When #7 key is turned at outside control station and all switches are closed, gate should reset. Panelview should indicate VTGE1 GATE RESET.

- 5.4.2 GATE RESET lamp outside should light to indicate that VTGE1 gate is reset.
Reset lamp outside lights _____
Panelview indicates VTGE1 GATE RESET _____
- 5.4.3 Check that Panelview indicates VTGE1 not reset when door is opened. Check indication for both divisions.
Panelview indicates gate not reset in A division for door open _____
Panelview indicates gate not reset in B division for door open _____
- 5.5 Sweep Check Station Function, CS1 through CS2, passage through gate while sweep is maintained and loss of sweep on R/A when door is opened.
- 5.5.1 Use Panelview to select Peer23 R/A.
- 5.5.2 At CS1 just inside VTGE1 gate, turn #7 key.
Sweep lamp does not light _____
- 5.5.3 Use Panelview to select Peer23 C/A.
- 5.5.4 At CS1 just inside VTGE1 gate, turn #7 key.
Sweep lamp flashes momentarily to indicate correct sweep sequence _____
- 5.5.5 With S/R from MCR, exit area and turn #7 key.
Sweep lamp lights and stays on the indicate completion of sweep _____
- 5.5.6 Observe that Panelview 1400 indicates that the VT area is swept _____
- 5.5.7 Reenter area with S/R and observe sweep lamp remains on _____
- 5.5.8 Exit area without S/R and observe loss of sweep _____
- 5.5.9 Reestablish sweep and place area on R/A and open gate.
Sweep is lost when VTGE1 gate is opened on R/A _____
- 5.5.10 Resweep area on C/A and operate crash button; observe loss of sweep _____

5.6 Restore area to original configuration.

5.6.1 Notify MCR OC that the system test is complete.

5.6.2 Remove posted notices in MCR and at VTGE1.

5.6.3 Remove LOTO of critical devices for this area.

5.7 The certification of the system is completed when the Safety System Group Leader and the RSC Chair approve the completed checkout sheets.

6. Documentation

6.1 Completed V-Target Access Security Gate Subsystem Check (this procedure)

7. References

None

8. Attachments

None